

Amendments to the Claims

The listing of claims will replace all prior versions and listings of claims in the application.

1-90. (cancelled)

91. (currently amended) An MMLV reverse transcriptase, wherein said reverse transcriptase comprises at least one mutation at an amino acid position selected from the group consisting of Tyr64, Arg116, Lys152, Gln190, Thr197, ~~Val223, Asp124, His126, Tyr133, His204, Tyr306,~~ and Phe309.

92. (previously presented) The reverse transcriptase of claim 91, wherein said mutation is at position Tyr64.

93. (previously presented) The reverse transcriptase of claim 92, wherein Tyr64 is replaced with a tryptophan.

94. (previously presented) The reverse transcriptase of claim 91, wherein said mutation is at position Arg116.

95. (previously presented) The reverse transcriptase of claim 94, wherein Arg116 is replaced with a methionine.

96. (previously presented) The reverse transcriptase of claim 91, wherein said mutation is at position Lys152.

97. (previously presented) The reverse transcriptase of claim 96, wherein Lys152 is replaced with an arginine.

98. (previously presented) The reverse transcriptase of claim 91, wherein said mutation is at position Gln190.

99. (previously presented) The reverse transcriptase of claim 98, wherein Gln190 is replaced with a phenylalanine.

100. (previously presented) The reverse transcriptase of claim 91, wherein said mutation is at position Thr197.

101. (previously presented) The reverse transcriptase of claim 100, wherein Thr197 is replaced with an alanine.

102. (cancelled)

103. (currently amended) An MMLV reverse transcriptase comprising a mutation ~~The reverse transcriptase of claim 102,~~ wherein Val223 is replaced with a histidine.

104-106. (cancelled)

107. (currently amended) The reverse transcriptase of claim 91, wherein said mutation is at position Phe309 ~~An MMLV reverse transcriptase, wherein said reverse transcriptase comprises at least one mutation at an amino acid position selected from the group consisting of His204, Tyr306, Phe309, or a combination thereof.~~

108-109. (cancelled)

110. (currently amended) The reverse transcriptase of claim 103 ~~[[107]]~~, wherein Phe309 is replaced with asparagine.

111. (currently amended) The reverse transcriptase of claim 91 or 103 ~~any one of claims 63, 71, 91, and 107~~, wherein said reverse transcriptase has substantially reduced RNase H activity.

112. (previously presented) The reverse transcriptase of claim 111, wherein said reverse transcriptase comprises at least one mutation at an amino acid position selected from the group consisting of Asp544, Asp583, Glu562, or a combination thereof.

113. (previously presented) The reverse transcriptase of claim 112, wherein Asp544 is replaced with glycine.

114. (previously presented) The reverse transcriptase of claim 112, wherein Asp583 is replaced with asparagine.

115. (previously presented) The reverse transcriptase of claim 112, wherein Glu562 is replaced with glutamine.

116. (currently amended) The reverse transcriptase of claim 91 or 103 ~~any one of claims 63, 71, 91, and 107~~, further comprising at least one mutation in the RNase H domain.

117. (currently amended) The reverse transcriptase of claim 91 or 103 ~~any one of claims 63, 71, 91, and 107~~, further comprising at least one mutation selected from the group consisting of Asp544, Asp583, Glu562, or a combination thereof.

118. (previously presented) The reverse transcriptase of claim 117, wherein Asp544 is replaced with glycine.

119. (previously presented) The reverse transcriptase of claim 117, wherein Asp583 is replaced with asparagine.

120. (previously presented) The reverse transcriptase of claim 117, wherein
Glu562 is replaced with glutamine.